

**PLAN OF ACTION AND  
SITE HEALTH AND SAFETY PLAN**

**BUILDING 324 UNDERGROUND STORAGE TANK REMOVAL  
AT  
NAVAL TRAINING CENTER (NTC)  
GREAT LAKES, ILLINOIS**

**ENVIRONMENTAL JOB ORDER CONTRACT (EJOC)  
CONTRACT NO. N68950-00-D-0200  
DELIVERY ORDER NO. 0047  
TOLTEST PROJECT NO. 42532.01**

*Submitted to:*

**Department of the Navy  
Naval Training Center (NTC) – Contracting Department  
Building 1-A, 201 Decatur Avenue  
Great Lakes, Illinois 60088-5600**

*Submitted by:*

**TOLTEST, INC.  
1915 N. 12<sup>th</sup> Street  
P.O. Box 2186  
Toledo, Ohio 43603  
419-241-7175**

**January 2002**

**PLAN OF ACTION AND  
SITE HEALTH AND SAFETY PLAN**

**BUILDING 324 UNDERGROUND STORAGE TANK REMOVAL  
AT  
NAVAL TRAINING CENTER (NTC)  
GREAT LAKES, ILLINOIS**

**ENVIRONMENTAL JOB ORDER CONTRACT (EJOC)  
CONTRACT NO. N68950-00-D-0200  
DELIVERY ORDER NO. 0047  
TOLTEST PROJECT NO. 42532.01**

*Submitted to:*

**Department of the Navy  
Naval Training Center (NTC) – Contracting Department  
Building 1-A, 201 Decatur Avenue  
Great Lakes, Illinois 60088-5600**

*Submitted by:*

**TOLTEST, INC.  
1915 N. 12<sup>th</sup> Street  
P.O. Box 2186  
Toledo, Ohio 43603  
419-241-7175**

**January 2002**

## TABLE OF CONTENTS

	<u>Page No.</u>
Executive Summary .....	E-1
PART I – WORK PLAN .....	1
1.0 Introduction .....	1
2.0 Equipment, Tools, and Personnel .....	2
3.0 UST Removal Sequence and Operational Approach .....	3
3.1 Permitting and Notification .....	1
3.2 UST Removal .....	3
3.3 UST Confirmation Sampling .....	3
3.4 Backfill and Compaction .....	3
4.0 Schedule .....	9

---

**TABLE OF CONTENTS (Continued)**

	<u>Page No.</u>
PART II – SITE HEALTH AND SAFETY PLAN .....	1
1.0 Introduction .....	1
2.0 Applicability .....	2
3.0 Site Safety and Health .....	3
3.1 Key Personnel .....	3
3.2 Personal Protective Equipment .....	3
3.3 Site Control Measures .....	5
3.4 Site Standard Operating Safety Procedures .....	5
3.5 Site-Specific Respiratory Protection .....	6
3.6 Material Safety Data Sheets (MSDS) .....	6
4.0 Accident Prevention .....	7
4.1 Daily Safety Inspections .....	7
4.2 Accident Reporting .....	7
4.3 Excavation Safety .....	7
4.4 Activity Hazard Analysis .....	8
5.0 Emergency Response .....	10
5.1 Decontamination .....	10
5.2 Emergency Medical Treatment and First Aid .....	10
5.3 Emergency Alerting and Response Procedures .....	10
5.4 Spill and Discharge Control .....	11

---

## **TABLE OF CONTENTS (Continued)**

### **LIST OF APPENDICES (PART 1)**

APPENDIX A - UST Removal Permit  
APPENDIX B - Incident Report  
APPENDIX C - Activity Hazard Analysis  
APPENDIX D - Hospital Directions

### **LIST OF TABLES (PART I)**

Table 1 - TolTest Employees, Equipment, Sub-contractors

### **LIST OF TABLES (PART II)**

Table 1 - Chemical Hazards of Concern

---

## **Executive Summary**

TolTest, Inc. has been retained by the Department of the Navy, Naval Facilities Engineering Command under Contract No. N68950-00-D-0200, Delivery Order (DO) No. 0047 to remove and dispose of one diesel underground storage tank (UST) estimated to be 500-gallons in capacity. TolTest, Inc. (TolTest) will remove the UST in accordance with 35 Illinois Administrative Code (IAC) Parts 170, 732, and 742.

The UST is located north of the former Building 324 footprint at the NTC in Great Lakes, Illinois. During the demolition activities for Building 324, Lake County Grading, Inc. (LCG) uncovered a UST estimated to be 500-gallons in capacity. The UST is partially filled with diesel and water mixture. The UST is suspected to have been formerly used to store diesel fuel for a turbine engine that was utilized for training purposes.

In addition to removing the UST, TolTest will collect confirmation soil samples from the UST cavity and evaluate the soil samples for benzene, ethyl benzene, toluene, total xylenes (BTEX), and polynuclear aromatic hydrocarbons (PNAs) in accordance with 35 IAC, Part 732.310.

TolTest was contacted to perform a site walk and submit an emergency UST Removal Application to the Office of the State Fire Marshall (OSFM). TolTest submitted a UST Removal Application on December 5, 2001 and the application was approved by the OSFM on December 7, 2001. TolTest has scheduled the UST removal activities for January 3, 2002.

This plan is divided into two parts, Part I – Plan of Action, and Part II - Site Health and Safety Plan. Included in this plan are the UST removal procedures and safety procedures. This plan will be reviewed and approved by the Contracting Officer's Technical Representative (COTR) prior to the start of any work.

## **PART I – PLAN OF ACTION**

### **1.0 Introduction**

This Plan of Action outlines the procedures that will be utilized for the removal of one 500-gallon diesel underground storage tank (UST) located at the Building 324 demolition site at the Naval Training Center (NTC) in Great Lakes, Illinois.

The scope of work will include, but is not limited to, the following tasks:

- Dispose of approximately 250-gallons of a diesel and water mixture contained within the UST;
- Remove, clean, and dispose of one 500-gallon UST;
- Collect confirmation soil samples from the UST cavity and remote fill pipe trench;
- Excavate and dispose of 15 cubic yards (CY) of petroleum hydrocarbon impacted soil;
- Backfill and machine compact the excavation cavity with stone and imported soil;
- Submit a 20-Day Certificate, 45-Day Report, and Free Product Recovery Report, as needed, to the Illinois Environmental Protection Agency (IEPA) if the UST is determined to have released petroleum hydrocarbons to the environment; and
- Submit a Delivery Order Closure Report (DOCR) to the Contracting Officer's Technical Representative (COTR) upon completion of field activities.

## 2.0 Equipment, Tools, and Personnel

This section details the equipment and personnel to be utilized for the removal of the UST. Personnel assigned to this project may change if needed to efficiently complete all tasks defined in this Plan of Action. Any personnel changes will be with comparable TolTest personnel. TolTest will coordinate the use of sub-contractors. Table 1 depicts the equipment, TolTest personnel, and sub-contractors that will be utilized to complete this DO.

TABLE 1		
EQUIPMENT	TOLTEST PERSONNEL	SUB-CONTRACTORS
Truck Compressor Drum-vac Assorted hand tools Generator Backhoe Photoionization Detector LEL/O2 Meter	Jeff Tinney Project Manager Mike Graf QA/QC Officer Mike Hubans Site Superintendent/Health and Safety Officer Floyd Cushing Labor	Kestrel Hawk Landfill Soil Disposal  AEA Laboratory Soils Laboratory  Cleveland Corporation UST Disposal  American Waste Processing Water Disposal



### **3.0 UST Removal Sequence and Operational Approach**

The construction sequence and operational approach are defined in the following sections.

#### **3.1 Permitting and Notification**

On December 5, 2001, TolTest submitted a Notification of Tank Removal to the Office of the State Fire Marshal (OSFM) for the removal of the 500-gallon heating oil UST. The OSFM in return issued Permit Number 03462 to TolTest for the removal of the 500-gallon UST. TolTest then scheduled an appointment with Ms. Susan Dwyer, a tank inspector for the OSFM, on January 3, 2001 to witness the UST removal activities. A copy of the UST permit can be found in Appendix A.

The OSFM Inspector will witness the removal of the UST from the excavation cavity and the opening and cleaning of the tank. In addition, the OSFM Inspector will evaluate whether a release from the UST has impacted the subsurface environmental quality conditions at the site. If a release has occurred, the site will be classified as minor, significant, or major depending on the site location, severity of petroleum hydrocarbon impact within the excavation, and the condition of the UST when removed. The OSFM Inspector will file a report with the Division of Land Pollution Control, who will in turn issue a Land Pollution Control (LPC) number for the site.

If the tank has been determined to have been leaking by the OSFM Inspector, TolTest or the COTR will notify the Illinois Emergency Management Agency (IEMA) within 24 hours of discovering the release to obtain an incident number for the site. The IEMA incident number will be forwarded to the OSFM Inspector. TolTest will submit the 20-Day Certification and 45-Day Report to the IEPA. TolTest will complete all other reporting as required by Illinois Administrative Code, Title 35.

#### **3.2 UST Removal**

The following UST removal sequence shall be adhered to as promulgated by the Illinois OSFM regulation 35 Illinois administrative Code (IAC), Parts 170 and 732.

The excavation activities will commence at the direction of the COTR. Excavation activities will be conducted in accordance with 29 CFR 1926.650 through 1926.653. Section 4.3 of the Health and Safety Plan (Part II) details excavation safety procedures. The UST will be uncovered by a

backhoe to expose the UST and other ancillary equipment. Should any petroleum hydrocarbon impacted soil be encountered, the COTR will be notified immediately. NTC Environmental Department calculations indicate that approximately 15 cubic yards (CY) of petroleum hydrocarbon impacted soil will be encountered and disposed as non-hazardous waste in accordance with the local, state, and federal regulations. The implementation of any remedial alternatives outside the above mentioned parameters will be conducted with a modification to this DO.

Field screening will be performed on soil removed from the excavated area. Soils removed from the excavation will be segregated into a "non-impacted" stockpile or "impacted" stockpile based on olfactory, visual observations, and photoionization detector (PID) headspace screening. The soil collected for PID headspace screening will be sealed in a plastic zip lock bag and warmed for approximately fifteen minutes. The tip of a RAE Systems MiniRAE® PID will be inserted into the bag for one minute. After one minute has elapsed, the highest reading will be considered the final PID result.

The Site Superintendent/Health and Safety Officer will conduct air monitoring of the tank interior and the general work area. Air monitoring measurements will be documented. Ventilation/purging of the UST will be conducted in accordance with 35 IAC Part 170 and API 1604 Section 4.2. The UST will be purged by venting all vapors from the UST at a minimum height of 12 feet above grade. Flammable and combustible vapors may be purged using an eductor-type air mover driven by compressed air or by placing dry ice into the UST.

Testing of the UST atmosphere will be regularly conducted for oxygen and flammable or combustible vapor concentration until the UST is removed from the excavation cavity, opened, cleaned, and removed from the site. Readings will be taken from the bottom, middle, and top of the vessel, as required. Tank readings of 10% or less of the lower explosive limit (LEL) must be obtained before the UST is considered safe for removal from the ground. Prior to monitoring for combustible gas levels, the oxygen level must first be determined to be between the Occupational Safety and Health Administration (OSHA) action levels of 19.5% and 23.5% for proper combustible gas indication. A combustible gas meter will not operate properly where oxygen levels are less than 19.5% or greater than 23.5%. If it is less than 19.5%, the operation will be shut down and ventilated until oxygen levels are greater than 19.5% but less than 23.5%.

When the UST atmosphere has been evaluated to be safe by TolTest and the OSFM Inspector, the UST will be removed from the excavation cavity. Log chains or cable chokers will be rigged to the backhoe and the UST to remove the UST from the excavation cavity. The UST will be staged on plastic outside the exclusion zone and secured in place by setting chocks along the sides of the UST.

Once the UST is secured on the plastic, TolTest will cut a hole in each tank end to render the UST useless. Any sludge or debris inside the UST will be removed from the UST. The material removed from inside the UST will be staged in a 55-gallon drum and a "Hold Pending Analysis" label will be placed on the drum.

After the UST has been cleaned, TolTest will transport the UST to the Cleveland Corporation for disposal. The steel UST will be recycled and Cleveland Corporation will provide TolTest with a weight ticket documenting that the UST was accepted at their recycling facility in Zion, Illinois.

### 3.3 UST Confirmation Sampling

Closure samples will be collected from the UST excavation cavity if field observations and screening methods indicate that a release from the UST has not occurred. No materials exhibiting visual, olfactory or measurable off-gas characteristics will be submitted to the laboratory for analysis as closure samples. In the case that a release has occurred, closure samples will be collected after the impacted material has been removed from the UST excavation cavity.

A total of six (6) confirmatory grab samples will be collected from the UST excavation cavity and one (1) grab sample will be collected from the remote fill pipe trench will be collected for laboratory analysis. Specifically, The confirmation samples shall be collected from the following locations:

- Four (4) soil samples will be collected from the base of the side walls (1 soil sample from the base of each side wall).
- Two (2) soil samples will be collected from the excavation floor (1 from beneath each end of the UST).
- One sample from the bottom of the remote fill pipe trench every 20 linear feet.

The confirmation samples will be submitted to AEA Laboratories, Inc. for laboratory analysis in accordance with IEPA requirements. The confirmation samples will be analyzed for the following analytical parameters:

- BTEX by USEPA Method 5035/8260.
- PNAs by USEPA Method 8100.

Sample locations will be documented utilizing a global positioning satellite (GPS) instrument. The sample location will be identified by latitude and longitude bearings. The UST location will also be documented utilizing the GPS instrument. TolTest will submit the confirmation sample and UST locations to the COTR. The GPS locations may be used by the Department of the Navy for future subsurface investigations if the UST cavity is found to contain petroleum hydrocarbon impacted soil.

#### 3.4 Backfill and Compaction

After the UST excavation cavity confirmation soil samples have been collected, TolTest will backfill the excavation cavity. TolTest will place approximately 20 tons of three-inch rock in the bottom of the excavation cavity to provide a suitable base to compact from.

Once the three-inch rock is placed, TolTest will import clean soil that will be used to backfill the excavation cavity to match the surrounding grade at the site. The imported soil will be placed in eight-inch lifts and each lift will be compacted with the bucket of the backhoe. This process will be repeated until the imported soil is compacted to match the surrounding grade at the site.

#### **4.0 Schedule**

The work schedule will be ten-hour days, four days per week. The construction sequence will begin once approvals and all necessary permits and notifications have been received. All work will be completed within 60 days after contract award.

## **PART II – SITE HEALTH AND SAFETY PLAN**

### **1.0 Introduction**

TolTest is responsible for the safety, health and emergency response provisions for this contract. These provisions are provided through the development and implementation of TolTest's Corporate Health and Safety Plan and this Site Health and Safety Plan (HASP). All personnel on site, contractors and subcontractors included, will be informed of this plan and any potential health and safety hazards of the operation.

## **2.0 Applicability**

This plan will be followed during all site activities starting with site mobilization through and including site demobilization. This plan incorporates the requirements of the following regulations and/or appropriate guidance:

- Federal Acquisition Regulation (FAR) clause 52.236-13, Accident Prevention,
- OSHA Construction Industry Standards, 29 CFR 1926,
- OSHA General Industry Standards, 29 CFR 1910 (including but not limited to 29 CFR 1910.120, Hazardous Waste Site Activities),
- NIOSH/OSHA/USCG/EPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities,
- 40 CFR Parts 280, 281, 263-265, and IL Title 35 Section 700 through 750,
- 49 CFR Part 178,
- OPNAVINST 5090.1B and the base Hazardous Waste Management Plan, and
- Other applicable Federal, State, and local safety and health requirements.

The implementation of the Work Plan includes the removal of one (1) UST located on the Building 324 demolition site at the NTC in Great Lakes, Illinois.

### **3.0 Site Safety and Health**

This section addresses the responsibilities for safety and health oversight, personnel protective equipment, site specific control measures and operating procedures.

**3.1 Key Personnel.** The Site Safety and Health Officer (SSHO), for this DO, has the overall responsibility for ensuring that the provisions of this SHSP are implemented in the field. The SSHO will be present during the period that heavy equipment is operating and will observe and record the activities. The SSHO is responsible for conducting daily tailgate safety meetings and site inspections to ensure the effectiveness of this plan. As field conditions change, decisions will be made regarding additional protective measures. Personnel assigned to this project are experienced and meet the supervisory training requirements specified by OSHA in 29 CFR 1910.120 as well as first aid and CPR training. The SSHO is also trained in accordance with the bloodborne pathogen regulation 29 CFR 1910.1300. In the event the SSHO becomes injured or impaired TolTest field personnel can render first aid and CPR.

### **3.2 Personal Protective Equipment**

Personal protective equipment (PPE) is to be used by employees for each of the site tasks and operations being performed. The type of PPE will depend upon the level of potential exposure to hazards. Table 1 lists potential chemical hazards of concern. EPA Level D PPE is anticipated to be used for this project. Table 1 includes chemical hazards that may be found in petroleum products. TolTest personnel will be equipped at a minimum with the below mentioned PPE. If unexpected conditions arise and it is determined that respiratory protection is needed, EPA Level D will be upgraded to EPA Level C. Level D may include:

- Working Uniform
- Tyvek suit (may be used pending site conditions)
- Boots/shoe, steel toe
- Hard hat
- Safety Glasses
- Hearing protection if noise level exceeds 84 dB
- Latex Gloves



**TABLE 1**  
**CHEMICAL HAZARDS OF CONCERN**

Excavating/Soil Sampling

CONTAMINANT	TWA/IDLH	SOURCE/ CONCENTRATION	ROUTES OF EXPOSURE	MONITORING METHOD
BENZENE	TWA: 10.0 ppm Ceiling Conc: 250 ppm	Surface soil, 0 to 5 ppm Liquids/sludge 0 to 5 ppm	Inhalation Ingestion Contact Absorption	NIOSH: 1501 IP: 9.245 eV FI.P: 12 F
TOLUENE	TWA: 200 ppm Ceiling Conc: 300 ppm	Surface soil, 0 to 5 ppm Liquids/sludge, 0 to 5 ppm	Inhalation Ingestion Contact Absorption	NIOSH: 1501 IP: 8.82 eV FI.P: 40 F
ETHYL BENZENE	TWA: 100 ppm 435 mg/m <sup>3</sup> Ceiling Conc: N/A	Surface soil, 0 to 5 ppm Liquids/sludge, 0 to 5 ppm	Inhalation Ingestion Contact Absorption	NIOSH: 1501 IP: 8.76 eV FI.P: 55 F
XYLENE	TWA: 100 ppm 480 mg/m <sup>3</sup> Ceiling Conc: N/A	Surface soil, 0 to 5 ppm Liquids/sludge, 0 to 5 ppm	Inhalation Ingestion Contact Absorption	NIOSH: 1501 IP: 8.56 eV FI.P: 63 F

NIOSH = National Institute for Occupational Safety and Health

OSHA = Occupational Safety And Health Act (Administration)

### 3.3 Site Control Measures

Control procedures will be implemented to prevent unauthorized access to the work area. Safety cones and caution tape will be utilized around the work area. The SSHO will ensure that all personnel entering the site have the necessary training and medical approval documentation. Personnel entering the site will be given a thorough briefing on the site hazards and safe work procedures prior to proceeding. This safety meeting will be conducted on a daily basis and will be documented. The topics of discussion will include potential physical and chemical hazards involved in tank removal activities. The Corporate Health & Safety Manual will be used as a reference to discuss in detail the pertinent topics that are applicable for each days work activities.

All visitors will be expected to comply with applicable regulatory OSHA requirements as well as the requirements of this HASP. Visitors will also be expected to provide their own PPE. In the event that a visitor does not adhere to the provisions of the HASP, they will be requested to leave the work area. All non-conformance incidents will be recorded in the site log. The SSHO will document a written record of all personnel entering and exiting the site.

### 3.4 Site Standard Operating Safety Procedures

The following safety rules will be adhered to during all site activities:

- At least one copy of this plan will be available at the project site, in a location readily available to all personnel, including visitors.
- Personnel should practice contamination avoidance. All liquid, sludge, and soil samples will be collected in such a manner to minimize contact or exposure to the materials being sampled.
- No food or beverages shall be present or consumed in the work area.
- No alcohol or drugs shall be present or consumed on site, or in any company vehicle. No personnel will be permitted to work while under the influence of alcohol or drugs while on site or operating a company vehicle.

- Emergency equipment will be located in the company vehicle in a readily accessible location. Emergency equipment will consist of fire extinguishers, first aid kit, and mobile telephone.
- Visual contact shall be maintained between crew members at all times, and crew members must observe each other for signs of exposure to chemical, biological, or physical agents. Indications of adverse effects include, but are not limited to:
  - Changes in complexion and skin coloration;
  - Changes in coordination;
  - Changes in demeanor;
  - Excessive salivation and pupillary response; and
  - Changes in speech pattern.
- All personnel shall inform their partners or team members of non-visible effects of overexposure to chemical, biological, or physical agents. Symptoms of overexposure may include:
  - Headaches;
  - Dizziness;
  - Nausea;
  - Blurred vision;
  - Cramps; and
  - Irritation of the eyes, skin, or respiratory tract.

### 3.5 Site-Specific Respiratory Protection

During this project petroleum containing liquids/sludges are being removed. This may pose an inhalation hazards at the site. The work area and breathing zones will be monitored with a PID. It is anticipated that respiratory protection will not be needed. If monitoring indicates respiratory protection is necessary, work will stop until the situation is assessed. The selection of respirators as well as any decisions regarding upgrading or downgrading of respiratory protection will be made by the SSHO.

### 3.6 Material Safety Data Sheets (MSDS)

There are no known hazardous materials anticipated to be brought on site.

## **4.0 Accident Prevention**

This section includes activity hazard analysis, which describe the work activity, probable hazards related to the work, and proactive precautionary measures that will be taken for safeguarding against and minimizing or eliminating each particular hazard. In addition, daily safety inspections, accident reporting, excavation safety and liquid/soil handling safety are discussed in the following paragraphs.

### **4.1 Daily Safety Inspections**

All machinery and equipment will be inspected daily by the Site Supervisor/ SSHO to ensure a safe operating condition. Inspections will be in accordance with the manufacturer's recommendations and will be documented. Records of inspections will be maintained at the site, will be made available upon request, and will become part of the project file.

In addition to daily inspections, the SSHO will conduct a daily safety meeting. The SSHO will discuss safety topics relevant to the hazards involved in that day's work. All employees and visitors will review and sign the safety-log, which documents the topics of discussion. The safety-log will be submitted to the COTR with the Contractor Quality Control Reports on a weekly basis.

### **4.2 Accident Reporting**

All accident reporting and record keeping requirements will be adhered to. TolTest's forms will be completed for all incidents including personal injury reports, safety incident reports, equipment damage reports, and vehicle accident reports. All reports will be submitted to the Navy representative within 24 hours of any accident. Copies of these forms are included in Appendix B.

### **4.3 Excavation Safety**

All excavating work will be conducted in strict conformance with, at a minimum, 29 CFR 1926.650 through 29 CFR 1926.653, including requirements for continuously sloping excavations to 1-1/2 to 1 (33°41') angle of repose, unless TolTest tests the soil. If TolTest tests and categorizes the soils, an angle of repose, as indicated below, may be utilized.

APPROXIMATE ANGLE OF REPOSE for Sloping of Sides of Excavations

Type of Soil	Angle of Repose
• Solid Rock, Shale, or Cemented Sand and Gravel	90°
• Compacted Angular Gravel	1/2:1 (63°1')
• Average Soils	1:1 (45°)
• Compacted Sharp Sand	1-1/2:1 (33°41')
• Well-Rounded Loose Sand	2:1 (26°34')

NOTE: Silts, loams, or non-homogenous soils require shoring and bracing. The presence of ground water requires special treatment.

Shoring and sheeting of the excavation will be used, if necessary, to prevent injury to persons, damage to structures, injurious caving and erosion. The shoring, sheeting and bracing will be carefully removed, as the excavation is backfilled.

Excavation work will not commence until TolTest has contacted the utility companies (gas, electric, telephone, and pipeline) and determined locations of any underground or overhead utilities. Clearances to adjacent overhead transmission and distribution electrical lines will be sufficient for the movement of vehicles and operation of construction equipment. The requirements stated in OSHA 29 CFR 1926 General Construction Industry Standard and the National Electric Safety Code will be followed by TolTest.

During periods when the work site is unoccupied (i.e., overnight, weekends and other similar off periods) barricades will be placed around the excavation site in such a manner to alert personnel to the danger and prevent them from entering the work area.

#### 4.4 Activity Hazard Analysis

Listed below is a description of each task/operation in terms of the definable features associated with the major phase of work. The protective measures to be implemented during completion of those operations are identified in the activity hazard located in Appendix C. Activity Hazard Analyses have been developed for:

- a. Site Walk Through
- b. Excavation
- c. Tank Cleaning
- d. Tank Purging/Inerting
- e. Demolition
- f. Subsurface Soil Sampling

## **5.0 Emergency Response**

TolTest will implement an emergency response and contingency procedures, in accordance with OSHA standards 29 CFR 1910.120(L). This section addresses decontamination, emergency medical treatment and first aid, emergency response procedures, and spill and discharge control.

### **5.1 Decontamination**

All site personnel should minimize contact with contaminants in order to minimize the need for extensive decontamination. The SSHO is responsible for monitoring decontamination procedures and determining their effectiveness.

### **5.2 Emergency Medical Treatment and First Aid**

There are no anticipated hazards expected on site, which require specific medical attention or protocols. All TolTest employees participate in TolTest's medical screening and surveillance programs. If an injury/illness or exposure occurs, employees must seek medical attention immediately. All TolTest field personnel are trained in first aid and CPR and can administer immediate assistance.

### **5.3 Emergency Alerting and Response Procedures**

All hazardous substance releases or spills involving Government waste or Government property, other than the original release, will be immediately reported to the Department of the Navy. Spill cleanup and remediation and damage to the environment resulting from TolTest actions will be the responsibility of TolTest.

Below are a list of emergency numbers, emergency service organizations and directions to the nearest hospital. A telephone is located inside the TolTest support truck.

#### **Emergency Telephone Numbers**

Naval Training Center Environmental Office	847-688-5999
Navy Hazardous Substance Response Team	847-688-3333
Great Lakes Fire Department, Emergency	847-688-3333
Great Lakes Police Department, Emergency	847-688-3333
Navy Hospital Ambulance Service	847-688-3333
Secondary Fire Department, North Chicago	847-689-3121

Secondary Hospital, St. Therese, Waukegan	847-249-3900
National Response Center, Coast Guard	800-424-8802
CHEMTREC Emergency Response	800-424-9300
Environmental Hotline	847-688-4197

A primary and secondary route to the hospital can be found in Appendix D.

#### 5.4 Spill and Discharge Control

This section provides contingency measures for potential spills and discharges from the handling and transportation of any contaminated soil, contamination fluids, and/or oil/fuel. If a spill or discharge occurs, the following actions, at a minimum, will be taken:

1. Notify the Department of the Navy representative immediately.
2. Take immediate measures to control and contain the spill within the site boundaries. This will include, at a minimum, the following actions:
  - Keep unnecessary people away, isolate hazardous areas, and deny entry.
  - Do not allow anyone to touch spilled material.
  - Stay upwind; keep out of low areas where fluids and/or vapors may accumulate.
  - Keep combustibles away from the spilled material
  - Use water spray or foam to reduce vapor or dust generation, as needed
  - Take samples for analysis to determine that clean up is adequate
  - Take other corrective measures, as needed

A written report will be submitted to the Department of the Navy within seven days of a verbal report. The SSHO will conduct spill prevention briefings daily during safety meetings for all personnel who are involved with handling, receipt, storage, and/or cleanup of oil/fuel.

**Storage** All tanks, containers, and pumping equipment used for the storage or handling of flammable and combustible liquids will be labeled or placarded in accordance with the US DOT. Oils or fuels temporarily stored will be kept in tightly sealed containers (with the exception of proper venting), in fire-resistant areas and at safe distances from ignition sources. All transfer vessels will be emptied at the end of the workday.



**Pumping Flammable and Combustible Liquids** Flammable liquid pumping systems will be electrically bonded and grounded, and will be drawn from, or transferred into vessels, containers, or tanks through a closed piping system, from safety cans, by means of a device drawing through the top, or from a container, or portable tanks, by gravity or pump, through an approved self closing valve. Transferring by means of air pressure on the container or portable tank is prohibited.

**Equipment Inspection** Equipment inspection is part of the daily routine during field activities. The Site Supervisor is to ensure that no oil/fuel spill has accumulated in any area by conducting daily visual inspection of the equipment. Equipment and safety issues will be documented in the daily report.

## **APPENDIX A**

### **UST Removal Permit**



OFFICE OF THE ILLINOIS STATE FIRE MARSHAL  
Division of Petroleum and Chemical Safety  
1035 Stevenson Drive  
Springfield, Illinois 62703-4259  
(217)785-1020 or (217)785-5878

FOR OFFICE USE ONLY

Facility # 2-040765  
Permit # 03462-2001REM  
Request Rec'd 12/06/2001  
Amended Date  
Approval Date 12/07/2001 SM  
Permit Expires 06/07/2002  
Commencement Date 01/05/2002

**Permit for REMOVAL of Underground Storage Tank(s) and Piping for Petroleum and Hazardous Substances.**

Permission to remove underground storage tank(s) or piping is hereby granted. Such removal shall not commence until the contractor the permit was issued to or an employee of that contractor (this does not include a subcontractor) shall establish a date certain to perform the UST activity by contacting the Office of the State Fire Marshal, Division of Petroleum and Chemical Safety, by telephone at the Springfield office between 8:30 a.m. and 12:00 p.m., at which time a mutually agreed upon date and time for the UST activity shall be scheduled. **THIS PERMIT IS VALID FOR SIX MONTHS FROM THE APPROVAL DATE.**

<b>(1) OWNER OF TANKS</b> - Corporation, partnership, or other business entity: Department of the Navy 201 Decatur Ave, Building 1A Great Lakes, IL 60088 Contact: Same	<b>(2) FACILITY</b> - name and address where tanks are located: Department of the Navy 201 Decatur Ave Building 324 Great Lakes, Lake Co., IL Contact: Mark Schultz (847) 688-5999 Ext. 40
---	--

**(3) REMOVAL OF TANKS:**

- (a) *Number and size of tanks being removed:* (TK # 1) - 500 gallons
  - (b) *Product stored in each tank:* (TK # 1) - Diesel
  - (c) *Reason of tanks being removed:* Emergency permit requested. Unknown location of UST discovered during a building demolition. UST is now preventing the completion of the project.
  - (d) *If tank(s) is leaking, indicate IEMA incident number:*
  - (e) *Date each tank was last used:* (TK # 1) - 01/01/1945
- (4) Owner must notify this Office when completion of tank removal has occurred, on the Notification Form for Underground Storage Tank Form. Please note a form has been forwarded to the name and address shown in Item 1 ( All pages of this form must be completed).

**SPECIAL CONTINGENCIES:**

**(6) PERSON, FIRM OR COMPANY PERFORMING WORK:**

ToiTest Inc  
1000 Northpoint Boulevard,  
Waukegan, IL 60085

Contact Person: Jeff Tunney  
Phone: (847) 689-0697

Contractor Registration # IL-2132 Exp.

Sincerely,

*W. Dale Tanker*  
W Dale Tanker, Storage Tank Safety Engineer

cc: Storage Tank Safety Specialist -Dwyer  
Fire Department  
Office Coordinator - JS  
Division File  
(Rev - 1/98)

WDT.

Jan 31

## **APPENDIX B**

### **Incident Report**

## ATTACHMENT 2 ASSOCIATE INJURY REPORT

This report is to be initiated by the associate's supervisor. Please answer all questions completely. This report must be forwarded to the Manager, Corporate Health and Safety within 24 hours of the injury/illness

Injured's Name \_\_\_\_\_ Sex \_\_\_\_\_ SSN \_\_\_\_\_ Birth Date \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone ( ) \_\_\_\_\_

Job Title \_\_\_\_\_ Hire Date \_\_\_\_\_ Hourly Wage \_\_\_\_\_

Date of Incident \_\_\_\_\_ Time \_\_\_\_\_ Time Reported \_\_\_\_\_ To Whom? \_\_\_\_\_

Project/Department Name \_\_\_\_\_ Address \_\_\_\_\_

Project No \_\_\_\_\_ Time Shift Began \_\_\_\_\_ Did Associate Leave Work? ☐ No ☐ Yes When? \_\_\_\_\_

Has associate returned to work? ☐ No ☐ Yes When \_\_\_\_\_ Did associate miss a regularly scheduled shift? ☐ No ☐ Yes

Doctor/Hospital Name \_\_\_\_\_ Address \_\_\_\_\_

Witness Name(s) \_\_\_\_\_ Statement Attached? ☐ No ☐ Yes

Nature of Injury \_\_\_\_\_ Exact Body Part \_\_\_\_\_

Medical Attention: ☐ None ☐ First Aid On Site ☐ Doctor's Office ☐ Hospital ER ☐ Hospitalized

Job Assignment at Time of Incident \_\_\_\_\_

Describe Incident \_\_\_\_\_

\_\_\_\_\_

Associate: \_\_\_\_\_

Print

Signature

Date

Comments on Incident and Corrective Action(s) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What Unsafe Condition(s) and/or Act(s) Contributed to the Incident? \_\_\_\_\_

\_\_\_\_\_

What Corrective Action(s) Have Been Taken to Prevent Recurrence? \_\_\_\_\_

\_\_\_\_\_

Supervisor: \_\_\_\_\_

Print

Signature

Date

## ASSOCIATE INJURY REPORT

### CONTINUED

Manager, Corporate Health and Safety

Concur With Action Taken? ☐ Yes ☐ No Remarks \_\_\_\_\_

OSHA Classification: ☐ First Aid ☐ Recordable, No Lost/Restricted Workdays  
☐ Recordable, Lost Workdays ☐ Recordable, Restricted Activity ☐ Fatality

Days Away From Work \_\_\_\_\_

Days Restricted Work \_\_\_\_\_

Workers Compensation Claim Number (if applicable) \_\_\_\_\_

To/ Test Tracking No. \_\_\_\_\_

Verbal Received (Date/Time) \_\_\_\_\_

Report Received (Date/Time) \_\_\_\_\_

Drug Screen ☐ Yes ☐ No Alcohol Screen ☐ Yes ☐ No

Manager, Corporate Health and Safety:

Print \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

A. Type of Injury or Illness Code: \_\_\_\_\_

E. Agent Code: \_\_\_\_\_

B. Injured Body Part Code: \_\_\_\_\_

F. Safety Rule Violated Code: \_\_\_\_\_

C. Activity at Time of Incident Code: \_\_\_\_\_

G. Incident Prevention Code: \_\_\_\_\_

D. Cause Code: \_\_\_\_\_

H. Instruction/RE-Instruction Code: \_\_\_\_\_

### ATTACHMENT 3

## GENERAL LIABILITY, PROPERTY DAMAGE AND LOSS REPORT

This report is to be completed for all losses or damage to company property in excess of \$1000 and all third party damage, regardless of value, resulting from company activities

Project/Department/Location \_\_\_\_\_ Project No. \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

How Did Damage or Loss Occur \_\_\_\_\_

Description and Value (\$) of Damaged/Lost/Stolen Property: \_\_\_\_\_

Location of Damaged/Lost/Stolen Property (Before Loss): \_\_\_\_\_

Date and Time of Damage, Loss or Theft: \_\_\_\_\_

#### Owner of Damaged/Lost/Stolen Property:

Name \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

Employer and Address \_\_\_\_\_

#### Injured Parties (Also completed a Supervisor's Associate Injury Report if a Company Associate):

Name \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

Employer and Address \_\_\_\_\_

Description of Injury \_\_\_\_\_

#### Witnesses:

1. Name \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

Employer and Address \_\_\_\_\_

2. Name \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

Employer and Address \_\_\_\_\_

Were Pictures Taken? ☐ Yes ☐ No

Were Police Notified? ☐ Yes ☐ No Dept \_\_\_\_\_ Report No. \_\_\_\_\_

#### Completed By:

Print \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

Manager, Corporate Health and Safety:

Print \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

## ATTACHMENT 4 INCIDENT INVESTIGATION REPORT

**\* MUST BE COMPLETED WITHIN 72 HOURS \***

Investigation Date \_\_\_\_\_ Date of Incident \_\_\_\_\_

Employee Name \_\_\_\_\_

Supervisor Name \_\_\_\_\_

Dept Name/Project Number/Project Name \_\_\_\_\_

Location of Incident \_\_\_\_\_

Incident Classification

Injury ☐ First Aid Vehicle ☐ Chargeable DOT ☐ DOT Vehicle  
☐ OSHA Recordable ☐ Non-Chargeable ☐ DOT Reportable  
☐ Lost Workday ☐ Restricted Workday Near Miss ☐ General Liability ☐

- Description (Provide facts, describe how incident occurred, provide diagram [on back] or photos)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Analysis 1 (What unsafe acts or conditions contributed to the incident?)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Analysis 2 (What systematic or management deficiencies contributed to incident?)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Corrective Action(s) (List corrective action items, responsible person, scheduled completion date)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Witnesses (Attach statements or indicate why unavailable)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Investigated By \_\_\_\_\_  
Print Signature Date

Manager Corp \_\_\_\_\_  
Health and Safety Print Signature Date



## ATTACHMENT 5 INCIDENT REVIEW BOARD

DATE.		LOCATION.	
BOARD MEMBERS:			
INCIDENT DATE:		ASSOCIATE(S) INVOLVED IN INCIDENT.	
INVESTIGATION COMPLETE:		YES <input type="checkbox"/>	INCIDENT CLASSIFICATION
NO <input type="checkbox"/>			
THE FOLLOWING INFORMATION <u>MUST</u> BE PROVIDED BY THE REVIEW BOARD FOR THIS INCIDENT (PRINT)			
SUPERVISOR: _____			
CAUSE OF INCIDENT:			
ACTION(S) RECOMMENDED BY BOARD*:			
*ALL ACTIONS BY THE INCIDENT REVIEW BOARD ARE SUBJECT TO FINAL REVIEW BY THE INDIVIDUALS LISTED BELOW			
ACCEPTED:			
_____ ASSOCIATE SIGNATURE		_____ SUPERVISOR SIGNATURE	
ACCEPTED		REJECTED FOR:	
_____ MANAGER, CORPORATE HEALTH AND SAFETY		_____ _____	
ACCEPTED:		REJECTED FOR:	
_____ MANAGER, HUMAN RESOURCES		_____ _____	
ACCEPTED		REJECTED FOR:	
_____ DIVISION VICE PRESIDENT		_____ _____	

## ATTACHMENT 6 VEHICLE INCIDENT REPORT

INCIDENT DESCRIPTION

This report is to be initiated by the associate involved in the incident or his/her direct supervisor. Please answer all questions completely. This report must be forwarded to the Manager, Corporate Health and Safety within 24 hours of the incident.

INCIDENT DATE \_\_\_\_\_ TIME \_\_\_\_\_ A.M. or P.M.  
LOCATION OF INCIDENT (ADDRESS, CITY AND STATE) \_\_\_\_\_  
DESCRIPTION OF INCIDENT \_\_\_\_\_

WITNESS \_\_\_\_\_ PHONE NO. ( ) \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
POLICE OFFICER'S NAME \_\_\_\_\_ DEPARTMENT \_\_\_\_\_

COMPANY VEHICLE

DRIVER \_\_\_\_\_ DRIVER'S LICENSE \_\_\_\_\_ STATE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
WORK PHONE NO. ( ) \_\_\_\_\_ SSN \_\_\_\_\_ PROJECT NAME/NO \_\_\_\_\_ OFFICE/DEPT \_\_\_\_\_  
VEHICLE NO. \_\_\_\_\_ YEAR \_\_\_\_\_ MAKE \_\_\_\_\_ MODEL \_\_\_\_\_ LICENSE PLATE NO \_\_\_\_\_  
STATE \_\_\_\_\_ VEHICLE OWNER \_\_\_\_\_ COMPANY \_\_\_\_\_ LEASED/RENTED \_\_\_\_\_ PRIVATE VEHICLE \_\_\_\_\_  
VEHICLE TYPE \_\_\_\_\_ COMMERCIAL MOTOR VEHICLE \_\_\_\_\_ NON COMMERCIAL \_\_\_\_\_  
IF NOT COMPANY-OWNED: OWNER \_\_\_\_\_ PHONE NO. ( ) \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
VEHICLE DAMAGE \_\_\_\_\_  
NO. OF VEHICLES TOWED FROM SCENE \_\_\_\_\_ NUMBER OF INJURIES \_\_\_\_\_ NUMBER OF FATALITIES \_\_\_\_\_  
WERE HAZARDOUS MATERIALS RELEASED? \_\_\_\_\_ YES \_\_\_\_\_ NO \_\_\_\_\_ IF YES, DESCRIBE MATERIALS \_\_\_\_\_

OTHER VEHICLE(S)

DRIVER \_\_\_\_\_ DRIVERS LICENSE \_\_\_\_\_ STATE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
PHONE NO. ( ) \_\_\_\_\_ SSN \_\_\_\_\_  
OWNERS NAME (CHECK IF SAME AS DRIVER) \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
INSURANCE COMPANY \_\_\_\_\_ POLICY NO \_\_\_\_\_  
ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
VEHICLE: YEAR \_\_\_\_\_ MAKE \_\_\_\_\_ MODEL \_\_\_\_\_ PLATE NO \_\_\_\_\_ STATE \_\_\_\_\_  
VEHICLE IDENTIFICATION NUMBER \_\_\_\_\_  
VEHICLE DAMAGE \_\_\_\_\_  
PASSENGERS YES \_\_\_\_\_ NO \_\_\_\_\_ INJURIES YES \_\_\_\_\_ (List names and telephone numbers below) \_\_\_\_\_ NO \_\_\_\_\_

WEATHER \_\_\_\_\_ CLEAR \_\_\_\_\_ CLOUDY \_\_\_\_\_ FOG \_\_\_\_\_ RAIN \_\_\_\_\_  
\_\_\_\_\_ SLEET \_\_\_\_\_ SNOW \_\_\_\_\_ OTHER \_\_\_\_\_  
PAVEMENT \_\_\_\_\_ ASPHALT \_\_\_\_\_ STEEL \_\_\_\_\_ CONCRETE \_\_\_\_\_ WOOD \_\_\_\_\_  
\_\_\_\_\_ GRAVEL/DIRT \_\_\_\_\_ BRICK/STONE \_\_\_\_\_ OTHER \_\_\_\_\_  
CONDITION \_\_\_\_\_ DRY \_\_\_\_\_ WET \_\_\_\_\_ ICY \_\_\_\_\_ POTHOLES \_\_\_\_\_  
\_\_\_\_\_ OTHER \_\_\_\_\_  
TRAFFIC CONTROL \_\_\_\_\_ TRAFFIC LIGHT \_\_\_\_\_ STOP SIGN \_\_\_\_\_ RAILROAD \_\_\_\_\_  
\_\_\_\_\_ NO INTERSECTION \_\_\_\_\_ NO CONTROL \_\_\_\_\_

## VEHICLE INCIDENT REPORT (continued)

ROADWAY \_\_\_\_\_ NUMBER OF LANES EACH DIRECTION \_\_\_\_\_ RESIDENTIAL \_\_\_\_\_  
\_\_\_\_\_ DIVIDED HIGHWAY \_\_\_\_\_ UNDIVIDED HIGHWAY \_\_\_\_\_

Draw and name roadways showing each vehicle, direction of travel, and point of impact. Indicate travel direction before the incident with a solid line and post-incident movement with a broken line.

SYMBOLS:

Your Vehicle

①

Other Vehicle(s)

②

③

Pedestrian

☺

+

Stop Sign

⬡

Yield

▽

Railroad

⚓

ADDITIONAL INFORMATION: \_\_\_\_\_

ASSOCIATE

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

SUPERVISOR

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

DEPARTMENT SAFETY REPRESENTATIVE

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

CORPORATE HEALTH & SAFETY MNGR

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

TRACKING # \_\_\_\_\_

HEALTH & SAFETY DEPARTMENT

INCIDENT REPORT ORDERED \_\_\_\_\_

AT FAULT Y N

ORIGINAL \_\_\_\_\_ H&S FILE

D&A SCREEN

DEFENSIVE DRIVING Y N

CC \_\_\_\_\_ ASSOCIATE \_\_\_\_\_ DEPT. SAFETY REP \_\_\_\_\_ W/C FILE \_\_\_\_\_ DENISE

## **APPENDIX C**

### **Activity Hazard Analysis**

## ACTIVITY HAZARD ANALYSIS

ACTIVITY Site Preparation/Layout ANALYZED BY/DATE K. Helman 10/98 REVIEWED BY/DATE J. Tinney 01/01

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
<p>Site walk through</p> <p>Identification of work zones for construction activities</p>	<ol style="list-style-type: none"> <li>1 Exposure to irritant and toxic plants such as poison ivy and sticker bushes may cause allergic reactions.</li> <li>2. Surfaces covered with heavy vegetation and under growth create a tripping hazard.</li> <li>3. Back strain due to carrying instruments</li> <li>4 Native wildlife such as rodents, ticks, and snakes present the possibility of insect bites and associated diseases such as Lyme disease</li> <li>5 Driving vehicles on uneven or unsafe surfaces can result in accidents such as overturned vehicles or flat tires</li> <li>6 Electrical hazard due to fallen lines.</li> <li>7. Thermal stress due to hot/cold temperature extremes.</li> </ol>	<ol style="list-style-type: none"> <li>1 Wear long sleeved clothing and slacks to minimize contact with irritant and toxic plants and to protect against insect bites. Appropriate first aid for personnel's known allergic reactions.</li> <li>2 Be alert and observe terrain while walking to minimize slips and falls. Steel-toed boots provide additional support and stability</li> <li>3. Use proper lifting techniques to prevent back strain</li> <li>4. Avoid wildlife when possible. In case of an animal bite, perform first aid and capture the animal, if possible, for rabies testing. Perform a tick check after leaving a wooded or vegetated area</li> <li>5. Ensure all maintenance is performed on vehicles before going to the field. Site surveillance on foot might be required to choose clear driving paths</li> <li>6. Ensure fallen power lines are not energized</li> <li>7. Implement thermal stress management techniques such as shifting work hours, fluid intake, and monitoring employees, especially high risk</li> </ol>
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
		<ol style="list-style-type: none"> <li>1. Review hazard analysis with personnel performing the site walk through prior to start</li> </ol>

## ACTIVITY HAZARD ANALYSIS

ACTIVITY Soil Excavation ANALYZED BY/DATE K. Helman 10/98 REVIEWED BY/DATE J. Tinney 01/01

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Excavation	<ol style="list-style-type: none"> <li>1. Exposure to airborne contaminants released during intrusive activities.</li> <li>2. Sides of excavation can cave in Possible burying or crushing of workers due to 1) absence of shoring, 2) misjudgment of stability, 3) defective shoring, and/or 4) undercut sides.</li> <li>3. Falling during access/egress or while monitoring or dismounting equipment, or stumbling into excavation.</li> <li>4 Congested work area due to too many workers in a small area</li> <li>5 Existing utilities</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitor for airborne contaminants</li> <li>2. Regularly inspect trenches for conditions.</li> <li>3. Provide adequate shoring or sloping of sides of the excavation Solid rock, cemented sand or gravel = 90 degrees Compact angular gravel = 63 degrees 26 ft. Compacted sharp sand = 33 degrees 41 ft deep Rounded loose sand = 26 degrees 34 ft deep</li> <li>4 Provide an adequate barrier around open pits Material from pit must be placed away from edge to prevent cave ins and instability of pit</li> <li>5. To prevent overexertion, limit manual lifting and emphasize mechanical means where practical</li> <li>6. Maintain ample workroom between workers</li> <li>7. Find and mark utilities before excavating utilizing the Joint Utility Locating Information for Excavators (JULIE) service 72 hours prior to excavation activities. Use care while excavating, shore existing utilities crossing excavation area. Watch for overhead lines</li> <li>8 Check the performance of JULIE locate prior to digging</li> </ol>
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1 Backhoe	Daily, prior to use per manufactures recommendations, Fill our Safety Inspection Checklist	OSHA 1910 120 40-hr. training, 3 day OJT, 8 hr Supervisory, 8 hr refresher, OSHA Hazard Communication, Respirator and operator training
2 Rolloff Boxes	Use of assistive climbing equipment when covering or placing tarp on box	



ACTIVITY Tank Removals ANALYZED BY/DATE R.R. Beckwith 11/93 REVIEWED BY/DATE J. Timney 01/01

[illegible]



ACTIVITY Tank Removals ANALYZED BY/DATE R.R. Beckwith 11/93 REVIEWED BY/DATE J. Tinney 01/01

[illegible]



## ACTIVITY II HAZARD ANALYSIS

ACTIVITY Tank Removals ANALYZED BY/DATE R.R. Beckwith 11/93 REVIEWED BY/DATE J. Tinney 01/01

[illegible]

## ACTIVITY HAZARD ANALYSIS

ACTIVITY Soil Sampling ANALYZED BY/DATE K. Helman 10/98 REVIEWED BY/DATE J. Tinney 01/01

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Subsurface Soil Sampling	<ol style="list-style-type: none"> <li>1. Dermal contact with or inhalation of contaminants, potentially in high concentrations in sampling media.</li> <li>2. Back strain and muscle fatigue due to lifting, shoveling and auguring techniques.</li> <li>3. Dermal contact with or inhalation of decontamination solutions.</li> </ol>	<ol style="list-style-type: none"> <li>1. To minimize exposure to chemical contaminants, a thorough review of suspected contaminants shall be completed and implementation of an adequate protection program.</li> <li>2. PPE shall include level D consisting of work uniform, steel toe boots/shoes, hard hat, safety glasses, hearing protection (when levels exceed 85 dbs) and tyvek suit (may not be needed depending on site conditions)</li> <li>3. Proper lifting (pre-lift weight assessment, use of legs, multiple personnel) techniques will prevent back strain. Use slow easy motions when shoveling, auguring, and digging to decrease muscle strain.</li> <li>4. Material Safety Data Sheets for all decontamination solutions shall be included with the Site Health and Safety Plan.</li> <li>5. First aid equipment shall be available based on MSDS requirements.</li> </ol>
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Soil sampling tools		OSHA 1910.120 40-hr. training, 3 day OJT, 8 hr. Supervisory, 8 hr. refresher, OSHA Hazard Communication, and Respirator training. Knowledge and training on collection of environmental samples.

## ACTIVITY HAZARD ANALYSIS

ACTIVITY Backfill & Site Restoration ANALYZED BY/DATE K. Helman 10/98 REVIEWED BY/DATE J. Tinney 01/01

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Backfill excavation  Compact backfill  Seed area	<ol style="list-style-type: none"> <li>Noise levels exceeding the OSHA PEL of 90 dBA are both a hazard and a hindrance to communication.</li> <li>Carbon monoxide from the heavy equipment.</li> <li>Overhead utility wires, i.e., electrical and telephone, can be hazardous when the dump truck bed is in the upright position.</li> <li>Falling backfill material from dump truck may cause injury</li> <li>Moving the equipment over uneven terrain may cause the vehicle to roll over or get stuck in a rut or mud. Be aware of hazards associated with moving heavy machinery and other associated injury.</li> <li>High-pressure hydraulic lines and airlines used on heavy equipment are hazardous when they are in ill repair or incorrectly assembled</li> </ol>	<ol style="list-style-type: none"> <li>Ear muffs or earplugs effectively reduce noise levels</li> <li>Review the contaminants suspected to be on-site and perform air monitoring as required. Shut down equipment and/or divert exhaust fumes</li> <li>All chains, lines, cables shall be inspected daily for weak spots</li> <li>Hard hats shall be worn at all times when working around heavy equipment</li> <li>Secure loose clothing</li> <li>To avoid contact with any overhead lines, the truck bed shall be lowered prior to moving the truck. Overhead utilities shall be considered "live" until determined otherwise</li> <li>The truck bed should not be erected within 10 feet of an overhead electrical line until the line is de-energized, grounded, or shielded and an electrician has certified that arcing cannot occur.</li> <li>All high-pressure lines shall be checked prior to and during use</li> </ol>
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
1 Backhoe	Daily, prior to use per manufactures recommendations, Fill our Safety Inspection Checklist	OSHA 1910.120 40-hr training, 3 day OJT, 8 hr. Supervisory, 8 hr. refresher, OSHA Hazard Communication, Respirator and operator training
2 Compactor	Daily, prior to use per manufactures recommendations, Fill our Safety Inspection Checklist	OSHA 1910.120 40-hr training, 3 day OJT, 8 hr. Supervisory, 8 hr. refresher, OSHA Hazard Communication, Respirator and operator training

## ACTIVITY HAZARD ANALYSIS

ACTIVITY Soil Loadout REVIEWED BY/DATE K. Helman 10/98 REVIEWED BY / DATE J. Tinney 01/01

<i>PRINCIPAL STEPS</i>	<i>POTENTIAL HAZARDS</i>	<i>RECOMMENDED CONTROLS</i>
Loadout Soil & Site Grading	<ol style="list-style-type: none"> <li>1. Noise levels exceeding 85 dbs are both a hazard and a hindrance to communication.</li> <li>2. Carbon monoxide from the heavy equipment.</li> <li>3. Overhead utilities.</li> <li>4. Falling backfill material from backhoe may cause injury.</li> <li>5. Moving the equipment over uneven terrain may cause the vehicle to roll over or get stuck</li> <li>6. High-pressure hydraulic lines and air lines used on heavy equipment are hazardous when they are in ill repair or incorrectly assembled.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ear muffs or earplugs effectively reduce noise levels</li> <li>2. Review the contaminants suspected to be on-site and perform air monitoring as required. Shut down equipment and/or divert exhaust fumes</li> <li>3. All chains, lines, cables should be inspected daily for weak spots</li> <li>4. Hard hats should be worn at all times when working around a heavy equipment.</li> <li>5. Secure loose clothing</li> <li>6. Overhead utilities should be considered "live" until determined otherwise</li> <li>7. Be aware of hazards associated with moving heavy equipment</li> <li>8. All high-pressure lines should be checked prior to and during use</li> </ol>
<i>EQUIPMENT TO BE USED</i>	<i>INSPECTION REQUIREMENTS</i>	<i>TRAINING REQUIREMENTS</i>
1 Backhoe	Daily, prior to use per manufactures recommendations, Fill our Safety Inspection Checklist	OSHA 1910.120 40-hr. training, 3 day OJT, 8 hr. Supervisory, 8 hr. refresher, OSHA Hazard Communication, Respirator and operator training
2 Loader	Daily, prior to use per manufactures recommendations, Fill our Safety Inspection Checklist	OSHA 1910.120 40-hr. training, 3 day OJT, 8 hr. Supervisory, 8 hr. refresher, OSHA Hazard Communication, Respirator and operator training

## **APPENDIX D**

### **Hospital Directions**

To US 41 & Interstate 94  
(Chicago & Milwaukee)

GOLF COURSE

DRMO  
Defense  
Readiness  
Management  
Office

BUCKLEY RD

CREDIT  
UNION  
HALSEY  
VILLAGE

NIMITZ  
VILLAGE

VETERANS  
AFFAIRS  
MEDICAL CENTER  
NORTH CHICAGO

RTC  
MAIN  
GATE

RECRUIT  
TRAINING  
COMMAND

CAMP PORTER

NTC  
MAIN  
GATE

CONSTITUTION  
FIELD

ROSS FIELD

NAVAL  
TRAINING  
CENTER

LAKE MICHIGAN

NAVAL  
TRAINING  
CENTER  
GREAT  
LAKES

#### BUILDING IDENTIFICATION NUMBERS

1	NTC HEADQUARTERS	525	CLUB NITRO
2	NAVY CAMPUS	535	GALLEY
3	PSD	590	MCDONALD'S
4	SSC HQ/RTS/LIBRARY	621	ET SCHOOL
13	TRIPLEX/BLUE JACKET	616	DS SCHOOL
42	CHAPEL/RCRTNG AREA	712	OUTDOOR CHECK-IN
67	GYM/ACQUETBALL		BILLETING
804	BOATHOUSE/MARINA	1200	GRADUATION DRILL HALL
110	FAMILY SERVICE CENTER	1301	RECRUIT CHAPEL
112	BOC	1405	RECRUIT INPROCESSING CTR
130	GYM/INDOOR POOL	199	INFANT CARE CENTER
142	ROSS AUDITORIUM	2111	AUTOMOTIVE HOBBY SHOP
181	POST OFFICE	2500	NAVY LODGE
200	PASS/ID	2600	FAMILY ACTIVITIES CENTER
220	HOSP CORPS SCHOOL	2630	FORRESTAL CHAPEL
237	PORT 'O CALL	2700	CHILD DEVELOPMENT CTR
239	BOWLING ALLEY	2710	MINI MART/GAS STATION
240	HOSPITAL	2711	RESERVE CENTER
241	LAUNDRY/TAILOR	3111	CHILD DEVELOPMENT
242	DRY-CLEANING	3200	HOUSING/HOUSEHOLD
257	MEDICAL/DENTAL CLINIC		GOODS/PERSONAL
259	ENGRNG SYS SCHOOL		PROPERTY
290	CREDIT UNION	3400	USMEPCOM
415	MINI-MART	3451	NEX
440	GYM/INDOOR POOL	3452	COMMISSARY
521	GM SCHOOL		

